

In the Claims:

Cancel claims 31-38 and 44-54 as indicated below.

31-38. (cancelled)

39. (previously added) A routing switch comprising a first and a second integrated multiphase spatial light modulator for spatial phase modulation of unpolarized light of a predetermined wavelength, the integrated spatial light modulators having a substantially planar liquid crystal layer, a layer reflective of said light of said wavelength and a wave-plate layer, the wave-plate layer providing an optical retardance of $(2n+1)\lambda/4$, said liquid crystal layer having two opposed faces and being disposed and configured to provide an out of plane tilt in response to a voltage applied between said faces, and said liquid crystal layer being spaced from the reflective layer by the said wave-plate layer, wherein the integrated spatial light modulators comprise an integrated array of phase modulating elements and voltage application circuitry, the voltage application circuitry for applying desired voltages across the liquid crystal layer whereby the liquid crystal layer has desired values of out of plane tilt; wherein the integrated multiphase spatial light modulators comprise an array of electrodes, each of the electrodes being associated with a respective portion of the liquid crystal layer to define a said phase modulating element, the electrodes being such that application of voltage to each electrode causes the portion of the liquid crystal layer associated with the said electrode to have a specific value of said out-of-plane tilt; and: wherein the voltage application circuitry is adapted to apply voltages to said array of electrodes for varying a deflection angle of light and the second integrated spatial light modulator is disposed with respect to the first integrated spatial light modulator for receiving light from said first integrated spatial light modulator thereby to route said light, the device further comprising:

a first array of optical fibers forming light sources directed to be off-normally incident on the first integrated spatial light modulator and a second array of optical fibers forming light receivers directed to be off-normally incident on the second integrated spatial light modulator for receiving light from the second integrated spatial light modulator; and

drive circuitry for forming a respective plurality of switching holograms on each integrated spatial light modulator, each said switching hologram on said first integrated spatial light modulator in use being operative to deflect light incident on said first

integrated spatial light modulator to said switching holograms on said second integrated spatial light modulator, and each said switching hologram on said second integrated spatial light modulator in use being operative to deflect said light beams to a respective optical receiver.

40. (previously added) The routing switch of Claim 39, wherein the switching holograms are spaced apart on said first and second integrated spatial light modulators and the first and second integrated spatial light modulators are disposed such that a respective zero-order beam reflected from each switching hologram on said first integrated spatial light modulator is incident on a spacing between two adjacent switching holograms on said second integrated spatial light modulator.

41. (previously added) The routing switch of Claim 39, wherein a half wave plate is disposed between said first and second integrated spatial light modulators.

42. (previously added) The routing switch of Claim 39, wherein the first and second spatial light modulators are mutually offset so no zero-order beams from the first spatial light modulator are incident on the second spatial light modulator.

43. (previously added) The routing switch of Claim 39, wherein the switching holograms are spaced apart on said first and second spatial light modulators, and the first and second spatial light modulators are disposed such that a respective second-order beam from each switching hologram on said first spatial light modulator is incident on a space between two adjacent switching holograms on said second spatial light modulator.

44-54. (cancelled)